

Sequence listing

<110> Sagami Chemical Research Center et al.

5 <120> Human Proteins Having Hydrophobic Domains And DNAs Encoding These
Proteins

<130> 661101

10 <141> 1999-06-18

<150> JP 10-180008

<151> 1998-06-26

15 <160> 40

<170> Windows 95 (Word 98)

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<212> PRT

<213> Homo sapiens

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Tyr Cys Ser Ile Leu Cys Asn Tyr Lys Ala Ile Glu Met Pro Ser His

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Gln Thr Tyr Gly Gly Ser Trp Lys Phe Leu Thr Phe Ile Asp Leu Val

30 35 40 45

Ile Gln Ala Val Phe Phe Gly Ile Cys Val Leu Thr Asp Leu Ser Ser

50 55 60

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Leu Leu Thr Arg Gly Ser Gly Asn Gln Glu Gln Glu Arg Gln Leu Lys
 65 70 75 80
 Lys Leu Ile Ser Leu Arg Asp Trp Met Leu Ala Val Leu Ala Phe Pro
 85 90 95
 5 Val Gly Val Phe Val Val Ala Val Phe Trp Ile Ile Tyr Ala Tyr Asp
 100 105 110
 Arg Glu Met Ile Tyr Pro Lys Leu Leu Asp Asn Phe Ile Pro Gly Trp
 115 120 125
 Leu Asn His Gly Met His Thr Thr Val Leu Pro Phe Ile Leu Ile Glu
 10 130 135 140
 Met Arg Thr Ser His His Gln Tyr Pro Ser Arg Ser Ser Gly Leu Thr
 145 150 155 160
 Ala Ile Cys Thr Phe Ser Val Gly Tyr Ile Leu Trp Val Cys Trp Val
 165 170 175
 15 His His Val Thr Gly Met Trp Val Tyr Pro Phe Leu Glu His Ile Gly
 180 185 190
 Pro Gly Ala Arg Ile Ile Phe Phe Gly Ser Thr Thr Ile Leu Met Asn
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 Phe Leu Tyr Leu Leu Gly Glu Val Leu Asn Asn Tyr Ile Trp Asp Thr
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T00E50"4E502260

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20 25 30
 Thr Pro Glu Ala Ala Val Leu Arg Ser Ala Ala Ala Arg Leu Arg Gln
 35 40 45
 Ile His Arg Ser Phe Phe Ser Ala Tyr Leu Gly Tyr Pro Gly Asn Arg
 5 50 55 60
 Phe Glu Leu Val Ala Leu Met Ala Asp Ser Val Leu Ser Asp Ser Pro
 65 70 75 80
 Gly Pro Thr Trp Gly Arg Val Val Thr Leu Val Thr Phe Ala Gly Thr
 85 90 95
 10 Leu Leu Glu Arg Gly Pro Leu Val Thr Ala Arg Trp Lys Lys Trp Gly
 100 105 110
 Phe Gln Pro Arg Leu Lys Glu Gln Glu Gly Asp Val Ala Arg Asp Cys
 115 120 125
 Gln Arg Leu Val Ala Leu Leu Ser Ser Arg Leu Met Gly Gln His Arg
 15 130 135 140
 Ala Trp Leu Gln Ala Gln Gly Gly Trp Asp Gly Phe Cys His Phe Phe
 145 150 155 160
 Arg Thr Pro Phe Pro Leu Ala Phe Trp Arg Lys Gln Leu Val Gln Ala
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 20 Phe Leu Ser Cys Leu Leu Thr Thr Ala Phe Ile Tyr Leu Trp Thr Arg
 180 185 190
 Leu Leu

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T0050 "HES02260

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20 25 30
 Asp Tyr Ile Asn Ala Arg Ser Cys Cys Ser Lys Leu Asn Lys Trp Val
 35 40 45
 Ile Pro Glu Leu Ile Gly His Thr Ile Val Thr Val Leu Leu Leu Met
 5 50 55 60
 Ser Leu His Trp Phe Ile Phe Leu Leu Asn Leu Pro Val Ala Thr Trp
 65 70 75 80
 Asn Ile Tyr Arg Tyr Ile Met Val Pro Ser Gly Asn Met Gly Val Phe
 85 90 95
 10 Asp Pro Thr Glu Ile His Asn Arg Gly Gln Leu Lys Ser His Met Lys
 100 105 110
 Glu Ala Met Ile Lys Leu Gly Phe His Leu Leu Cys Phe Phe Met Tyr
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 15 130 135

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 20 <213> Homo sapiens

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 35 40 45
 His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr Tyr Pro Lys Glu
 30 50 55 60
 Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg Leu Phe Ser Ile Cys
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[illegible]

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10 20 25 30
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35 40 45
Asn Pro Arg Gly Ala Val Thr Pro Glu Tyr Thr Val Ala Asn Val Ile
50 55 60
15 Ser Val Gly Ser Gly Leu Leu Ser Val Ser Val Gly Leu Val Ala Leu
65 70 75 80
Leu Ala Ser Arg Asn Leu Leu Arg Pro Pro Leu His Trp Val Leu Leu
85 90 95
Ala Leu Ala Leu Val Asn Leu Leu Leu Ser Val Ala Cys Ser Leu Gly
20 100 105 110
Leu Leu Leu Ala Val Ser Leu Thr Val Ala Asn Gly Gly Arg Arg Leu
115 120 125
Ile Ala Asp Cys His Pro Gly Leu Leu Asp Pro Leu Val Pro Leu Asp
130 135 140
25 Glu Gly Pro Gly His Thr Asp Cys Pro Phe Asp Pro Thr Arg Ile Tyr
145 150 155 160
Asp Thr Ala Leu Ala Leu Trp Ile Pro Ser Leu Leu Met Ser Ala Gly
165 170 175
Glu Ala Ala Leu Ser Gly Tyr Cys Cys Val Ala Ala Leu Thr Leu Arg
30 180 185 190
Gly Val Gly Pro Cys Arg Lys Asp Gly Leu Gln Gly Gln Val Val Ala
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Gly Ile Lys Val Lys Ala Leu

225

230

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<212> PRT

<213> Homo sapiens

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5

10

15

Thr Pro Ile Leu Gln Pro Thr Glu Ala Leu Ser Pro Glu Asp Gly Ala

15

20

25

30

Ser Thr Ala Leu Ile Ala Val Val Ile Thr Val Val Phe Leu Thr Leu

35

40

45

Leu Ser Val Val Ile Leu Ile Phe Phe Tyr Leu Tyr Lys Asn Lys Gly

50

55

60

20

Ser Tyr Val Thr Tyr Glu Pro Thr Glu Gly Glu Pro Ser Ala Ile Val

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70

75

80

Gln Met Glu Ser Asp Leu Ala Lys Gly Ser Glu Lys Glu Glu Tyr Phe

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90

95

Ile

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<212> PRT

<213> Homo sapiens

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8/45

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 Ala Ala Lys Asn Phe Glu Asp Val Arg Cys Lys Cys Ile Cys Pro Pro
 5 35 40 45
 Tyr Lys Glu Asn Ser Gly His Ile Tyr Asn Lys Asn Ile Ser Gln Lys
 50 55 60
 Asp Cys Asp Cys Leu His Val Val Glu Pro Met Pro Val Arg Gly Pro
 65 70 75 80
 10 Asp Val Glu Ala Tyr Cys Leu Arg Cys Glu Cys Lys Tyr Glu Glu Arg
 85 90 95
 Ser Ser Val Thr Ile Lys Val Thr Ile Ile Ile Tyr Leu Ser Ile Leu
 100 105 110
 Gly Leu Leu Leu Leu Tyr Met Val Tyr Leu Thr Leu Val Glu Pro Ile
 15 115 120 125
 Leu Lys Arg Arg Leu Phe Gly His Ala Gln Leu Ile Gln Ser Asp Asp
 130 135 140
 Asp Ile Gly Asp His Gln Pro Phe Ala Asn Ala His Asp Val Leu Ala
 145 150 155 160
 20 Arg Ser Arg Ser Arg Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln
 165 170 175
 Gln Arg Trp Lys Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp
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 Arg His Val Val Leu Ser
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30 <213> Homo sapiens

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 5 Ile Gln Ala Cys Leu Pro Leu Thr Phe Thr Pro Glu Glu Tyr Asp Lys
 35 40 45
 Gln Asp Ile Gln Leu Val Ala Ala Leu Ser Val Thr Leu Gly Leu Phe
 50 55 60
 Ala Val Glu Leu Ala Gly Phe Leu Ser Gly Val Ser Met Phe Asn Ser
 10 65 70 75 80
 Thr Gln Ser Leu Ile Ser Ile Gly Ala His Cys Ser Ala Ser Val Ala
 85 90 95
 Leu Ser Phe Phe Ile Phe Glu Arg Trp Glu Cys Thr Thr Tyr Trp Tyr
 100 105 110
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 35 40 45
 Gly Trp Lys Arg His Gly Ala His Ile Tyr Leu Thr Met Leu Leu Ser

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 Ile Ala Ile Trp Val Ala Trp Ile Thr Leu Leu Met Leu Pro Asp Phe
 65 70 75 80
 Asp Arg Arg Trp Asp Asp Thr Ile Leu Ser Ser Ala Leu Ala Ala Asn
 5 85 90 95
 Gly Trp Val Phe Leu Leu Ala Tyr Val Ser Pro Glu Phe Trp Leu Leu
 100 105 110
 Thr Lys Gln Arg Asn Pro Met Asp Tyr Pro Val Glu Asp Ala Phe Cys
 115 120 125
 10 Lys Pro Gln Leu Val Lys Lys Ser Tyr Gly Val Glu Asn Arg Ala Tyr
 130 135 140
 Ser Gln Glu Glu Ile Thr Gln Gly Phe Glu Glu Thr Gly Asp Thr Leu
 145 150 155 160
 Tyr Ala Pro Tyr Ser Thr His Phe Gln Leu Gln Asn Gln Pro Pro Gln
 15 165 170 175
 Lys Glu Phe Ser Ile Pro Arg Ala His Ala Trp Pro Ser Pro Tyr Lys
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 Asp Tyr Glu Val Lys Lys Glu Gly Ser
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 Ala Thr Ala Trp Leu Thr Phe Tyr Asp Ile Ala Met Thr Ala Gly Trp
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Leu Val Leu Ala Ile Ala Met Val Arg Phe Tyr Met Glu Lys Gly Thr
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 His Arg Gly Leu Tyr Lys Ser Ile Gln Lys Thr Leu Lys Phe Phe Gln
 65 70 75 80
 5 Thr Phe Ala Leu Leu Glu Ile Val His Cys Leu Ile Gly Ile Val Pro
 85 90 95
 Thr Ser Val Ile Val Thr Gly Val Gln Val Ser Ser Arg Ile Phe Met
 100 105 110
 Val Trp Leu Ile Thr His Ser Ile Lys Pro Ile Gln Asn Glu Glu Ser
 10 115 120 125
 Val Val Leu Phe Leu Val Ala Trp Thr Val Thr Glu Ile Thr Arg Tyr
 130 135 140
 Ser Phe Tyr Thr Phe Ser Leu Leu Asp His Leu Pro Tyr Phe Ile Lys
 145 150 155 160
 15 Trp Ala Arg Tyr Asn Phe Phe Ile Ile Leu Tyr Pro Val Gly Val Ala
 165 170 175
 Gly Glu Leu Leu Thr Ile Tyr Ala Ala Leu Pro His Val Lys Lys Thr
 180 185 190
 Gly Met Phe Ser Ile Arg Leu Pro Asn Lys Tyr Asn Val Ser Phe Asp
 20 195 200 205
 Tyr Tyr Tyr Phe Leu Leu Ile Thr Met Ala Ser Tyr Ile Pro Leu Phe
 210 215 220
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 25 Gly Glu Val Ile Val Glu Lys Asp Asp
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<210> 11

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30 <212> DNA

<213> Homo sapiens

FOOESQ"4ESQ2/60

12/45

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 aagctcatct ctctccggga ctggatgcta gctgtgttgg cctttcctgt tggggttttt 300
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 ggcattgtgg tgtacccttt cctggaacac attggcccag gagccagaat catcttcttt 600
 gggctacaaa ccatcttaat gaacttctg tacctgctgg gagaagttct gaacaactat 660
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<212> DNA

<213> Homo sapiens

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 tccgeggccg ccaggttacg gcagattcac cggctctttt tctccgccta cctcggtac 180
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 25 ggccccacct ggggcagagt ggtgacgctc gtgaccttcg cagggacgct gctggagaga 300
 gggccgctgg tgaccgcccg gtggaagaag tggggcttcc agccgcggt aaaggagcag 360
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 gggcagcacc gcgcctggct gcaggtcag ggcggctggg atggtttttg tcaattcttc 480
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<211> 417

<212> DNA

<213> Homo sapiens

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 tgetcaaaat taaacaagtg ggtaattcca gaattgattg gccataccat tgctactgta 180
 ttactgetca tgteattgca ctgggttcato ttccttctca acttacctgt tgccacttgg 240
 10 aatatatata gatacattat ggtgccgagt ggtaacatgg gagtgtttga tccaacagaa 300
 atacacaata gagggcagct gaagtcacac atgaaagaag ccatgatcaa gcttggtttc 360
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15 <211> 969

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<213> Homo sapiens

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 gtcttgggtg atacggcgctc ttgccaccgg gcctgtcagt tgacctacc cttgcacacc 180
 taccctaagg aagaggagtt gtacgcatgt cagagagggt gcaggctgtt ttcaatttgt 240
 cagtttgtgg atgatggaat tgacttaaata cgaactaaat tggaatgtga atctgcatgt 300
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 cagtetaagc cagaaatcca gtacgcacca catttgagc aggagcctac aaatttgaga 600
 30 gaatcatctc taagcaaaat gtcttatctg caaatgagaa attcacaagc gcacaggaat 660
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<212> DNA

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 gatacagcct tggtctctct gatcccttct ttgctcatgt ctgcagggga ggctgctcta 540
 tctggttact gctgtgtggc tgcactcact ctacgtggag ttggggccctg caggaaggac 600
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<400> 16

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 aagaacaaag gcagctacgt cacctatgaa cctacagaag gtgagcccag tgccatcgtc 240
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 <212> DNA
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 atatctcaga aagattgtga ttgccttcat gttgtggagc ccatgcctgt gcgggggcct 240
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 atcaagggtta ccattataat ttatctctcc attttgggce ttctacttct gtacatggta 360
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 cagagtgatg atgatattgg ggatcaccag ctttttgcaa atgcacacga tgtgctagcc 480
 cgtcccgca gtgcagccaa cgtgctgaac aaggtagaat atgcacagca gcgctggaag 540
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 25 <213> Homo sapiens

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<212> DNA

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aacagagcct actctcaaga ggaaatcact caaggttttg aagagacagg ggacacgctc 480
tatgccccct attccacaca ttttcagctg cagaaccagc ctccccaaaa ggaattctcc 540
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25 <213> Homo sapiens

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30 gacatcgcca tgaccgcggg gtggttggtt ctagctattg ccatggtacg tttttatatg 180
gaaaaaggaa cacacagagg tttatataaa agtattcaga agacacttaa atttttccag 240
acatttgctt tgcttgagat agttcactgt ttaattggaa ttgtacctac ttctgtgatt 300

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| | | |
|----|--|-----|
| | gtgactgggg tccaagtgag ttcaagaatc tttatggtgt ggctcattac tcacagtata | 360 |
| | aaaccaatcc agaatgaaga gagtgtggtg cttttttctgg tcgcgtggac tgtgacagag | 420 |
| | atcactcget attcettota cacattcage cttcttgacc acttgccata cttcattaaa | 480 |
| | tggggccagat ataatttttt tatcatotta tatectgttg gagttgctgg tgaacttctt | 540 |
| 5 | acaatatacg ctgccttgcc gcatgtgaag aaaacaggaa tgttttcaat aagacttcct | 600 |
| | aacaaataca atgtctcttt tgactactat tattttcttc ttataacccat ggcacatcat | 660 |
| | atacctttgt ttccacaact ctattttcat atgttacgtc aaagaagaaa ggtgcttcac | 720 |
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| 10 | <210> 21 | |
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| | Met Ala Leu Val Pro Cys Gln Val Leu | |
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| | cgg atg gca atc ctg ctg tct tac tgc tct atc ctg tgt aac tac aag | 100 |
| 20 | Arg Met Ala Ile Leu Leu Ser Tyr Cys Ser Ile Leu Cys Asn Tyr Lys | |
| | 10 15 20 25 | |
| | gcc atc gaa atg ccc tca cac cag acc tac gga ggg agc tgg aaa ttc | 148 |
| | Ala Ile Glu Met Pro Ser His Gln Thr Tyr Gly Gly Ser Trp Lys Phe | |
| | 30 35 40 | |
| 25 | ctg acg ttc att gat ctg gtt atc cag gct gtc ttt ttt ggc atc tgt | 196 |
| | Leu Thr Phe Ile Asp Leu Val Ile Gln Ala Val Phe Phe Gly Ile Cys | |
| | 45 50 55 | |
| | gtg ctg act gat ctt tcc agt ctt ctg act cga gga agt ggg aac cag | 244 |
| | Val Leu Thr Asp Leu Ser Ser Leu Leu Thr Arg Gly Ser Gly Asn Gln | |
| 30 | 60 65 70 | |
| | gag caa gag agg cag ctc aag aag ctc atc tct ctc cgg gac tgg atg | 292 |
| | Glu Gln Glu Arg Gln Leu Lys Lys Leu Ile Ser Leu Arg Asp Trp Met | |

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 5 tgg atc att tat gcc tat gac aga gag atg ata tac ccg aag ctg ctg 388
 Trp Ile Ile Tyr Ala Tyr Asp Arg Glu Met Ile Tyr Pro Lys Leu Leu
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 Asp Asn Phe Ile Pro Gly Trp Leu Asn His Gly Met His Thr Thr Val
 10 125 130 135
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 Leu Pro Phe Ile Leu Ile Glu Met Arg Thr Ser His His Gln Tyr Pro
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 15 Ser Arg Ser Ser Gly Leu Thr Ala Ile Cys Thr Phe Ser Val Gly Tyr
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 Ser Thr Thr Ile Leu Met Asn Phe Leu Tyr Leu Leu Gly Glu Val Leu
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 Asn Asn Tyr Ile Trp Asp Thr Gln Lys Ser Met Glu Glu Glu Lys Glu
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 atagaataca gttgtttcca aaagaactca ccctcactgt gtgttaaaga attcttccca 960
 aagtcattac tgataataac atttttttcc ttttctagtt ttaaaaccag aattggacct 1020
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 Trp Ile Ile Tyr Ala Tyr Asp Arg Glu Met Ile Tyr Pro Lys Leu Leu
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 30 125 130 135
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 Ile Leu Trp Val Cys Trp Val His His Val Thr Gly Met Trp Val Tyr
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 Asp Tyr Leu Gly Tyr Cys Ala Arg Glu Pro Gly Thr Pro Glu Pro Ala
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 cca tcc acg ccc gag gcc gcc gtg ctg cgc tcc gcg gcc gcc agg tta 144
 Pro Ser Thr Pro Glu Ala Ala Val Leu Arg Ser Ala Ala Ala Arg Leu
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 cgg cag att cac cgg tcc ttt ttc tcc gcc tac ctc ggc tac ccc ggg 192
 30 Arg Gln Ile His Arg Ser Phe Phe Ser Ala Tyr Leu Gly Tyr Pro Gly
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| | | | | | | | | | | | | | | | | | |
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| | Asn | Arg | Phe | Glu | Leu | Val | Ala | Leu | Met | Ala | Asp | Ser | Val | Leu | Ser | Asp | |
| | 65 | | | | | 70 | | | | | 75 | | | | | | |
| | agc | ccc | ggc | ccc | acc | tgg | ggc | aga | gtg | gtg | acg | ctc | gtg | acc | ttc | gca | 288 |
| | Ser | Pro | Gly | Pro | Thr | Trp | Gly | Arg | Val | Val | Thr | Leu | Val | Thr | Phe | Ala | |
| 5 | 80 | | | | | 85 | | | | | 90 | | | | | | |
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| | Gly | Thr | Leu | Leu | Glu | Arg | Gly | Pro | Leu | Val | Thr | Ala | Arg | Trp | Lys | Lys | |
| | 95 | | | | | 100 | | | | | 105 | | | | | 110 | |
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| 10 | Trp | Gly | Phe | Gln | Pro | Arg | Leu | Lys | Glu | Gln | Glu | Gly | Asp | Val | Ala | Arg | |
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| 15 | cac | cgc | gcc | tgg | ctg | cag | gct | cag | ggc | ggc | tgg | gat | ggc | ttt | tgt | cac | 480 |
| | His | Arg | Ala | Trp | Leu | Gln | Ala | Gln | Gly | Gly | Trp | Asp | Gly | Phe | Cys | His | |
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| 20 | 160 | | | | | 165 | | | | | 170 | | | | | | |
| | cag | gct | ttt | ctg | tca | tgc | ttg | tta | aca | aca | gcc | ttc | att | tat | ctc | tgg | 576 |
| | Gln | Ala | Phe | Leu | Ser | Cys | Leu | Leu | Thr | Thr | Ala | Phe | Ile | Tyr | Leu | Trp | |
| | 175 | | | | | 180 | | | | | 185 | | | | | 190 | |
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| 25 | Thr | Arg | Leu | Leu | | | | | | | | | | | | | |
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| | cagacgtttt | tacctgaatg | catacaagga | gtcctgaggt | ggtgatttgg | ccagtgtttt | | | | | | | | | | | 750 |
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| 30 | agaaatgggg | agtctagagc | ctctttatgc | caaagaaccg | cagaagaaac | tgcattccat | | | | | | | | | | | 870 |
| | taaatgggaa | atacagtgct | atttgctaaa | acttggataa | gagtgcgaac | ctctcatctc | | | | | | | | | | | 930 |
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| 15 | Pro Ser Thr Pro Glu Ala Ala Val Leu Arg Ser Ala Ala Ala Arg Leu | |
| | 35 40 45 | |
| | Arg Gln Ile His Arg Ser Phe Phe Ser Ala Tyr Leu Gly Tyr Pro Gly | |
| | 50 55 60 | |
| | Asn Arg Phe Glu Leu Val Ala Leu Met Ala Asp Ser Val Leu Ser Asp | |
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| | Gly Thr Leu Leu Glu Arg Gly Pro Leu Val Thr Ala Arg Trp Lys Lys | |
| | 95 100 105 110 | |
| 25 | Trp Gly Phe Gln Pro Arg Leu Lys Glu Gln Glu Gly Asp Val Ala Arg | |
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20 tca tgt tgc tca aaa tta aac aag tgg gta att cca gaa ttg att ggc 197

Ser Cys Cys Ser Lys Leu Asn Lys Trp Val Ile Pro Glu Leu Ile Gly

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cat acc att gtc act gta tta ctg ctc atg tca ttg cac tgg ttc atc 245

His Thr Ile Val Thr Val Leu Leu Leu Met Ser Leu His Trp Phe Ile

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Phe Leu Leu Asn Leu Pro Val Ala Thr Trp Asn Ile Tyr Arg Tyr Ile

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30 Met Val Pro Ser Gly Asn Met Gly Val Phe Asp Pro Thr Glu Ile His

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 5 120 125 130
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Asn Arg Gly Gln Leu Lys Ser His Met Lys Glu Ala Met Ile Lys Leu

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Gln Leu Gly Leu Pro Pro Leu Leu Leu Thr Met Ala Leu Ala Gly

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20 ggt tcg ggg acc gct tcg gct gaa gca ttt gac tcg gtc ttg ggt gat 148

Gly Ser Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp

30

35

40

acg gcg tct tgc cac ccg gcc tgt cag ttg acc tac ccc ttg cac acc 196

Thr Ala Ser Cys His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr

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Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg Leu

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ttt tca att tgt cag ttt gtg gat gat gga att gac tta aat cga act 292

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 Glu Leu Arg Gln Glu Gln Leu Met Ser Leu Met Pro Lys Met His Leu
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 25 Phe Leu Glu Asp Gly Glu Ser Asp Gly Phe Leu Arg Cys Leu Ser Leu
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 aac tct ggg tgg att tta act aca act ctt gtc ctc tcg gtg atg gta 772
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 Ala Pro His Leu Glu Gln Glu Pro Thr Asn Leu Arg Glu Ser Ser Leu
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ctc ttg tcc gtt gcc tgc tcc ctg ggc ctc ctt ctt gct gtg tca ctc 390

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Leu Leu Ser Val Ala Cys Ser Leu Gly Leu Leu Leu Ala Val Ser Leu

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act gtg gcc aac ggt ggc cgc cgc ctt att gct gac tgc cac cca gga 438

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10 15 20
 Ala Leu Ile Leu Val Gly His Val Asn Leu Leu Leu Gly Ala Val Leu
 25 30 35
 His Gly Thr Val Leu Arg His Val Ala Asn Pro Arg Gly Ala Val Thr
 5 40 45 50 55
 Pro Glu Tyr Thr Val Ala Asn Val Ile Ser Val Gly Ser Gly Leu Leu
 60 65 70
 Ser Val Ser Val Gly Leu Val Ala Leu Leu Ala Ser Arg Asn Leu Leu
 75 80 85
 10 Arg Pro Pro Leu His Trp Val Leu Leu Ala Leu Ala Leu Val Asn Leu
 90 95 100
 Leu Leu Ser Val Ala Cys Ser Leu Gly Leu Leu Leu Ala Val Ser Leu
 105 110 115
 Thr Val Ala Asn Gly Gly Arg Arg Leu Ile Ala Asp Cys His Pro Gly
 15 120 125 130 135
 Leu Leu Asp Pro Leu Val Pro Leu Asp Glu Gly Pro Gly His Thr Asp
 140 145 150
 Cys Pro Phe Asp Pro Thr Arg Ile Tyr Asp Thr Ala Leu Ala Leu Trp
 155 160 165
 20 Ile Pro Ser Leu Leu Met Ser Ala Gly Glu Ala Ala Leu Ser Gly Tyr
 170 175 180
 Cys Cys Val Ala Ala Leu Thr Leu Arg Gly Val Gly Pro Cys Arg Lys
 185 190 195
 Asp Gly Leu Gln Gly Gln Val Val Ala Gly Cys Asp Ala Arg Val Lys
 25 200 205 210 215
 Gln Lys Ala Trp Gln Pro Arg Phe Pro Gly Ile Lys Val Lys Ala Leu
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<210> 31

30 <211> 1189

<212> DNA

<213> Homo sapiens

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32/45

<400> 31

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 5 tagctgtgga accctagggt acctgttacc gcgctttggc gaaactgggt tcgctgctga 180
 tttgcgaacc tttgcctgac tttctcaggc cttgagagat ctaagtaaat ttggtggccc 240
 attgaaagga cctggagaga gctgatgaag atctgcctct tctccaagaa actcaaccac 300
 tagtgaca atg acc agc ctc ctg act act cct tct cca aga gaa gaa ctg 350
 Met Thr Ser Leu Leu Thr Thr Pro Ser Pro Arg Glu Glu Leu
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 atg acc acc cca att tta cag ccc act gag gcc ctg tcc cca gaa gat 398
 Met Thr Thr Pro Ile Leu Gln Pro Thr Glu Ala Leu Ser Pro Glu Asp
 15 20 25 30
 gga gcc agc aca gca ctc att gca gtt gtt atc acc gtt gtc ttc ctc 446
 15 Gly Ala Ser Thr Ala Leu Ile Ala Val Val Ile Thr Val Val Phe Leu
 35 40 45
 acc ctg ctc tcg gtc gtg atc ttg atc ttc ttt tac ctg tac aag aac 494
 Thr Leu Leu Ser Val Val Ile Leu Ile Phe Phe Tyr Leu Tyr Lys Asn
 50 55 60
 20 aaa ggc agc tac gtc acc tat gaa cct aca gaa ggt gag ccc agt gcc 542
 Lys Gly Ser Tyr Val Thr Tyr Glu Pro Thr Glu Gly Glu Pro Ser Ala
 65 70 75
 atc gtc cag atg gag agt gac ttg gcc aag ggc agc gag aaa gag gaa 590
 Ile Val Gln Met Glu Ser Asp Leu Ala Lys Gly Ser Glu Lys Glu Glu
 25 80 85 90
 tat ttc atc taatgactcc caggccccaa ggagcttatt cctggetcca t 640
 Tyr Phe Ile
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 cgctaacacg ttgactgctt attatgggaa agttttctct gaagccaggg agaagcattg 700
 30 attgatgtgg gcaaatacaa gctccagcca ggtcgcagtc ccaaatgcg acatcactga 760
 ctccagggac cagggacatg gagaaagctg tttatgatat ctttaaccag gccctcttac 820
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gtgcccagtc atcttttttc acaggttgaa gggagagaaa agattttgag ttaaggtcat 940
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 ccatacaagg tcttcccaga ggctggatac cacagtaaaa ggccaggcca ggaggggtag 1060
 gagactatgg agatcttacc tcttgataaa tgtgctacac cccctaatact gagcccttcc 1120
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<211> 97

10 <212> PRT

<213> Homo sapiens

<400> 32

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 Gly Ala Ser Thr Ala Leu Ile Ala Val Val Ile Thr Val Val Phe Leu
 35 40 45
 20 Thr Leu Leu Ser Val Val Ile Leu Ile Phe Phe Tyr Leu Tyr Lys Asn
 50 55 60
 Lys Gly Ser Tyr Val Thr Tyr Glu Pro Thr Glu Gly Glu Pro Ser Ala
 65 70 75
 Ile Val Gln Met Glu Ser Asp Leu Ala Lys Gly Ser Glu Lys Glu Glu
 25 80 85 90
 Tyr Phe Ile
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<210> 33

30 <211> 1500

<212> DNA

<213> Homo sapiens

T00E50"4E502460

34/45

<400> 33

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| | gtcccgggct gtgggaccgc tgggccccca gcg atg gcg acc ctg tgg gga ggc | 114 |
| 5 | Met Ala Thr Leu Trp Gly Gly | |
| | 1 5 | |
| | ctt ctt cgg ctt ggc tcc ttg ctc agc ctg tcg tgc ctg gcg ctt tcc | 162 |
| | Leu Leu Arg Leu Gly Ser Leu Leu Ser Leu Ser Cys Leu Ala Leu Ser | |
| | 10 15 20 | |
| 10 | gtg ctg ctg ctg gcg cag ctg tca gac gcc gcc aag aat ttc gag gat | 210 |
| | Val Leu Leu Leu Ala Gln Leu Ser Asp Ala Ala Lys Asn Phe Glu Asp | |
| | 25 30 35 | |
| | gtc aga tgt aaa tgt atc tgc cct ccc tat aaa gaa aat tct ggg cat | 258 |
| | Val Arg Cys Lys Cys Ile Cys Pro Pro Tyr Lys Glu Asn Ser Gly His | |
| 15 | 40 45 50 55 | |
| | att tat aat aag aac ata tct cag aaa gat tgt gat tgc ctt cat gtt | 306 |
| | Ile Tyr Asn Lys Asn Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val | |
| | 60 65 70 | |
| | gtg gag ccc atg cct gtg cgg ggg cct gat gta gaa gca tac tgt cta | 354 |
| 20 | Val Glu Pro Met Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu | |
| | 75 80 85 | |
| | cgc tgt gaa tgc aaa tat gaa gaa aga agc tct gtc aca atc aag gtt | 402 |
| | Arg Cys Glu Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val | |
| | 90 95 100 | |
| 25 | acc att ata att tat ctc tcc att ttg ggc ctt cta ctt ctg tac atg | 450 |
| | Thr Ile Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Leu Tyr Met | |
| | 105 110 115 | |
| | gta tat ctt act ctg gtt gag ccc ata ctg aag agg cgc ctc ttt gga | 498 |
| | Val Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly | |
| 30 | 120 125 130 135 | |
| | cat gca cag ttg ata cag agt gat gat gat att ggg gat cac cag cct | 546 |
| | His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln Pro | |

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| | | | | |
|----|---|-----|-----|------|
| | 140 | 145 | 150 | |
| | ttt gca aat gca cac gat gtg cta gcc cgc tcc cgc agt cga gcc aac | | | 594 |
| | Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg Ala Asn | | | |
| | 155 | 160 | 165 | |
| 5 | gtg ctg aac aag gta gaa tat gca cag cag cgc tgg aag ctt caa gtc | | | 642 |
| | Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys Leu Gln Val | | | |
| | 170 | 175 | 180 | |
| | caa gag cag cga aag tct gtc ttt gac cgg cat gtt gtc ctc agc | | | 687 |
| | Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val Val Leu Ser | | | |
| 10 | 185 | 190 | 195 | |
| | taattgggaa ttgaattcaa ggtgactaga aagaaacagg cagacaactg gaa | | | 740 |
| | agaactgact gggttttgct gggtttcatt ttaatacett gttgatttca ccaactgttg | | | 800 |
| | ctggaagatt caaaactgga agcaaaaact tgcttgattt ttttttcttg ttaacgtaat | | | 860 |
| | aatagagaca tttttaaaag cacacagctc aaagtcagcc aataagtctt ttctatttg | | | 920 |
| 15 | tgacttttac taataaaaat aaatctgcct gtaaattatc ttgaagtcct ttacctggaa | | | 980 |
| | caagcactct ctttttcacc acatagtttt aacttgactt tcaagataat tttcagggtt | | | 1040 |
| | tttggtgttg ttgttttttg tttgtttggt ttggtgggag aggggagggg tgacctggaa | | | 1100 |
| | gtggttaaca acttttttca agtcacttta ctaaacaac ttttgtaaag agaccttacc | | | 1160 |
| | ttctattttc gagtttcatt tatattttgc agtgtagcca gcctcatcaa agagctgact | | | 1220 |
| 20 | tactcatttg acttttgac tgactgtatt atctgggtat ctgctgtgtc tgcacttcat | | | 1280 |
| | ggtaaacggg atctaaaatg cctgggtggt tttcacaaaa agcagatttt cttcatgtac | | | 1340 |
| | tgtgatgtct gatgcaatgc atcctagaac aaactggcca tttgctagtt tactctaaag | | | 1400 |
| | actaaacata gtcttggtgt gtgtggtctt actcatcttc tagtaccttt aaggacaaat | | | 1460 |
| | cctaaggact tggacacttg caataaagaa attttatttt | | | 1500 |
| 25 | | | | |
| | <210> 34 | | | |
| | <211> 198 | | | |
| | <212> PRT | | | |
| | <213> Homo sapiens | | | |
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| | <400> 34 | | | |

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Met Ala Thr Leu Trp Gly Gly
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Leu Leu Arg Leu Gly Ser Leu Leu Ser Leu Ser Cys Leu Ala Leu Ser
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5 Val Leu Leu Leu Ala Gln Leu Ser Asp Ala Ala Lys Asn Phe Glu Asp
 25 30 35

Val Arg Cys Lys Cys Ile Cys Pro Pro Tyr Lys Glu Asn Ser Gly His
 40 45 50 55

Ile Tyr Asn Lys Asn Ile Ser Gln Lys Asp Cys Asp Cys Leu His Val
 10 60 65 70

Val Glu Pro Met Pro Val Arg Gly Pro Asp Val Glu Ala Tyr Cys Leu
 75 80 85

Arg Cys Glu Cys Lys Tyr Glu Glu Arg Ser Ser Val Thr Ile Lys Val
 90 95 100

15 Thr Ile Ile Ile Tyr Leu Ser Ile Leu Gly Leu Leu Leu Leu Tyr Met
 105 110 115

Val Tyr Leu Thr Leu Val Glu Pro Ile Leu Lys Arg Arg Leu Phe Gly
 120 125 130 135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln Pro
 20 140 145 150

Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg Ala Asn
 155 160 165

Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys Leu Gln Val
 170 175 180

25 Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val Val Leu Ser
 185 190 195

<210> 35

<211> 806

30 <212> DNA

<213> Homo sapiens

T00E50"4E50260

37/45

<400> 35

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gcctcagaga ccgcgcacct tgtcccgag ggcc atg ggc cgg gtc tca ggg ctt 115

Met Gly Arg Val Ser Gly Leu

5

1

5

gtg ccc tct cgc ttc ctg acg ctc ctg gcg cat ctg gtg gtc gtc atc 163

Val Pro Ser Arg Phe Leu Thr Leu Leu Ala His Leu Val Val Val Ile

10

15

20

acc tta ttc tgg tcc cgg gac agc aac ata cag gcc tgc ctg cct ctc 211

10 Thr Leu Phe Trp Ser Arg Asp Ser Asn Ile Gln Ala Cys Leu Pro Leu

25

30

35

acg ttc acc ccc gag gag tat gac aag cag gac att cag ctg gtg gcc 259

Thr Phe Thr Pro Glu Glu Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala

40

45

50

55

15 gcg ctc tct gtc acc ctg ggc ctc ttt gca gtg gag ctg gcc ggt ttc 307

Ala Leu Ser Val Thr Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe

60

65

70

ctc tca gga gtc tcc atg ttc aac agc acc cag agc ctc atc tcc att 355

Leu Ser Gly Val Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile

20

75

80

85

ggg gct cac tgt agt gca tcc gtg gcc ctg tcc ttc ttc ata ttc gag 403

Gly Ala His Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu

90

95

100

cgt tgg gag tgc act acg tat tgg tac att ttt gtc ttc tgc agt gcc 451

25 Arg Trp Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala

105

110

115

ctt cca gct gtc act gaa atg gct tta ttc gtc acc gtc ttt ggg ctg 499

Leu Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu

120

125

130

135

30 aaa aag aaa ccc ttc tgattacatt catgacggga acctaaggac gaagcc 550

Lys Lys Lys Pro Phe

140

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tacaggggca agggccgctt cgtattcctg gaagaaggaa ggcataaggct tcggttttcc 610
 cctcggaaac tgcttctgct ggaggatatg tgttggaata attacgtctt gagtctggga 670
 ttatccgcat tgtatttagt gctttgtaat aaaatatgtt ttgtagtaac attaagactt 730
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<212> PRT

10 <213> Homo sapiens

<400> 36

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Thr Leu Phe Trp Ser Arg Asp Ser Asn Ile Gln Ala Cys Leu Pro Leu

25

30

35

Thr Phe Thr Pro Glu Glu Tyr Asp Lys Gln Asp Ile Gln Leu Val Ala

20

40

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50

55

Ala Leu Ser Val Thr Leu Gly Leu Phe Ala Val Glu Leu Ala Gly Phe

60

65

70

Leu Ser Gly Val Ser Met Phe Asn Ser Thr Gln Ser Leu Ile Ser Ile

75

80

85

25 Gly Ala His Cys Ser Ala Ser Val Ala Leu Ser Phe Phe Ile Phe Glu

90

95

100

Arg Trp Glu Cys Thr Thr Tyr Trp Tyr Ile Phe Val Phe Cys Ser Ala

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Leu Pro Ala Val Thr Glu Met Ala Leu Phe Val Thr Val Phe Gly Leu

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140

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39/45

<210> 37

<211> 1718

<212> DNA

5 <213> Homo sapiens

<400> 37

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| | Met Asn Arg Thr Asn Val Asn val Phe Ser Glu Leu Ser | |
| 10 | 1 5 10 | |
| | gct cct cgt cgc aat gaa gac ttt gtc ctc ctg ctc acc tac gtc ctc | 98 |
| | Ala Pro Arg Arg Asn Glu Asp Phe Val Leu Leu Leu Thr Tyr Val Leu | |
| | 15 20 25 | |
| | ttc ttg atg gcg ctg acc ttc ctc atg tcc tcc ttc acc ttc tgt ggt | 146 |
| 15 | Phe Leu Met Ala Leu Thr Phe Leu Met Ser Ser Phe Thr Phe Cys Gly | |
| | 30 35 40 45 | |
| | tcc ttc acg ggc tgg aag aga cat ggg gcc cac atc tac ctc acg atg | 194 |
| | Ser Phe Thr Gly Trp Lys Arg His Gly Ala His Ile Tyr Leu Thr Met | |
| | 50 55 60 | |
| 20 | ctc ctc tcc att gcc atc tgg gtg gcc tgg atc acc ctg ctc atg ctt | 242 |
| | Leu Leu Ser Ile Ala Ile Trp Val Ala Trp Ile Thr Leu Leu Met Leu | |
| | 65 70 75 | |
| | cct gac ttt gac cgc agg tgg gat gac acc atc ctc agc tcc gcc ttg | 290 |
| | Pro Asp Phe Asp Arg Arg Trp Asp Asp Thr Ile Leu Ser Ser Ala Leu | |
| 25 | 80 85 90 | |
| | gct gcc aat ggc tgg gtg ttc ctg ttg gct tat gtt agt ccc gag ttt | 338 |
| | Ala Ala Asn Gly Trp Val Phe Leu Leu Ala Tyr Val Ser Pro Glu Phe | |
| | 95 100 105 | |
| | tgg ctg ctc aca aag caa cga aac ccc atg gat tat cct gtt gag gat | 386 |
| 30 | Trp Leu Leu Thr Lys Gln Arg Asn Pro Met Asp Tyr Pro Val Glu Asp | |
| | 110 115 120 125 | |
| | gct ttc tgt aaa cct caa ctc gtg aag aag agc tat ggt gtg gag aac | 434 |

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| | | |
|----|--|------|
| | Ala Phe Cys Lys Pro Gln Leu Val Lys Lys Ser Tyr Gly Val Glu Asn | |
| | 130 135 140 | |
| | aga gcc tac tct caa gag gaa atc act caa ggt ttt gaa gag aca ggg | 482 |
| | Arg Ala Tyr Ser Gln Glu Glu Ile Thr Gln Gly Phe Glu Glu Thr Gly | |
| 5 | 145 150 155 | |
| | gac acg ctc tat gcc ccc tat tcc aca cat ttt cag ctg cag aac cag | 530 |
| | Asp Thr Leu Tyr Ala Pro Tyr Ser Thr His Phe Gln Leu Gln Asn Gln | |
| | 160 165 170 | |
| | cct ccc caa aag gaa ttc tcc atc cca cgg gcc cac gct tgg ccg agc | 578 |
| 10 | Pro Pro Gln Lys Glu Phe Ser Ile Pro Arg Ala His Ala Trp Pro Ser | |
| | 175 180 185 | |
| | cct tac aaa gac tat gaa gta aag aaa gag ggc agc taactctgtc ctgaag | 630 |
| | Pro Tyr Lys Asp Tyr Glu Val Lys Lys Glu Gly Ser | |
| | 190 195 200 | |
| 15 | agtgggacaa atgcagccgg gcggcagatc tagcgggagc tcaaagggat gtgggcgaaa | 690 |
| | tcttgagtct tctgagaaaa ctgtacaaga cactacggga acagtttgcc tccctcccag | 750 |
| | cctcaaccac aattcttcca tgctggggct gatgtgggct agtaagactc cagttcttag | 810 |
| | aggcgtgtga gtattttttt tttttttgtc tcatccttag gatacttctt ttaagtggga | 870 |
| | gtctcaggca actcaagttt agacccttac tctttttgtt tgttttttga aacaggatct | 930 |
| 20 | tgctctgtca cccaggcttg agtgcagtgg tgcatcaca gcccagtga gccctgacca | 990 |
| | cctgtgtca agcaatctc ccatctccat ctcccaaagt gctgggatga caggcgtgag | 1050 |
| | ccacagctcc cagcctaggc ccttaattct gctgttattt tccatggact aaaggctctg | 1110 |
| | tcatctgagc tcacgtggc tcacacagct ctaggggcct gctcctctaa ctacagtg | 1170 |
| | gtttgtgag gctctgtggc ccagagcaga cctgcatatc tgagcaaaaa tagcaaaagc | 1230 |
| 25 | ctctctcagc ccactggcct gaatctacac tggaagccaa cttgctggca cccccgctcc | 1290 |
| | ccaacccttc ttgcctgggt aggagaggct aaagatcacc ctaaatttac tcatctctct | 1350 |
| | agtgtgcct cacactgggc ctacagcgt cccagcacc aattcacagg taccctctct | 1410 |
| | cttcttgac tgtcccaaaa cttgctgtca attccgagat ctaatctccc cctacgtct | 1470 |
| | gccaggaatt ctttcagacc tactagcac aagcccggtt gctccttgctc aggagaattt | 1530 |
| 30 | gtacatcatt ctcaattcaa attcctgggg ctgatacttc tctcatcttg caccccaacc | 1590 |
| | tctgtaaata gatttaccgc atttacggct gcattctgta agtgggcatg gtctccta | 1650 |
| | ggaggagtgt tcattgtata ataagttatt cacctgagta tgcaataaag atgtgggtggc | 1710 |

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cactcttt

1718

<210> 38

<211> 201

5 <212> PRT

<213> Homo sapiens

<400> 38

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 30 35 40 45
 15 Ser Phe Thr Gly Trp Lys Arg His Gly Ala His Ile Tyr Leu Thr Met
 50 55 60
 Leu Leu Ser Ile Ala Ile Trp Val Ala Trp Ile Thr Leu Leu Met Leu
 65 70 75
 Pro Asp Phe Asp Arg Arg Trp Asp Asp Thr Ile Leu Ser Ser Ala Leu
 20 80 85 90
 Ala Ala Asn Gly Trp Val Phe Leu Leu Ala Tyr Val Ser Pro Glu Phe
 95 100 105
 Trp Leu Leu Thr Lys Gln Arg Asn Pro Met Asp Tyr Pro Val Glu Asp
 110 115 120 125
 25 Ala Phe Cys Lys Pro Gln Leu Val Lys Lys Ser Tyr Gly Val Glu Asn
 130 135 140
 Arg Ala Tyr Ser Gln Glu Glu Ile Thr Gln Gly Phe Glu Glu Thr Gly
 145 150 155
 Asp Thr Leu Tyr Ala Pro Tyr Ser Thr His Phe Gln Leu Gln Asn Gln
 30 160 165 170
 Pro Pro Gln Lys Glu Phe Ser Ile Pro Arg Ala His Ala Trp Pro Ser
 175 180 185

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Pro Tyr Lys Asp Tyr Glu Val Lys Lys Glu Gly Ser

190

195

200

<210> 39

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<211> 995

<212> DNA

<213> Homo sapiens

<400> 39

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 tgtctcccac gtccccacagg tgcgcggcca cc atg gcg tcc agc gac gag gac 173
 Met Ala Ser Ser Asp Glu Asp
 1 5

15 ggc acc aac ggc ggc gcc tcg gag gcc ggc gag gac cgg gag gct ccc 221
 Gly Thr Asn Gly Gly Ala Ser Glu Ala Gly Glu Asp Arg Glu Ala Pro
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ggc aag cgg agg cgc ctg ggg ttc ttg gcc acc gcc tgg ctc acc ttc 269
 Gly Lys Arg Arg Arg Leu Gly Phe Leu Ala Thr Ala Trp Leu Thr Phe

20 25 30 35
 tac gac atc gcc atg acc gcg ggg tgg ttg gtt cta gct att gcc atg 317
 Tyr Asp Ile Ala Met Thr Ala Gly Trp Leu Val Leu Ala Ile Ala Met
 40 45 50 55

gta cgt ttt tat atg gaa aaa gga aca cac aga ggt tta tat aaa agt 365
 25 Val Arg Phe Tyr Met Glu Lys Gly Thr His Arg Gly Leu Tyr Lys Ser
 60 65 70

att cag aag aca ctt aaa ttt ttc cag aca ttt gcc ttg ctt gag ata 413
 Ile Gln Lys Thr Leu Lys Phe Phe Gln Thr Phe Ala Leu Leu Glu Ile
 75 80 85

30 gtt cac tgt tta att gga att gta cct act tct gtg att gtg act ggg 461
 Val His Cys Leu Ile Gly Ile Val Pro Thr Ser Val Ile Val Thr Gly
 90 95 100

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 ata aaa cca atc cag aat gaa gag agt gtg gtg ctt ttt ctg gtc gcg 557
 5 Ile Lys Pro Ile Gln Asn Glu Glu Ser Val Val Leu Phe Leu Val Ala
 120 125 130 135
 tgg act gtg aca gag atc act cgc tat tcc ttc tac aca ttc agc ctt 605
 Trp Thr Val Thr Glu Ile Thr Arg Tyr Ser Phe Tyr Thr Phe Ser Leu
 140 145 150
 10 ctt gac cac ttg cca tac ttc att aaa tgg gcc aga tat aat ttt ttt 653
 Leu Asp His Leu Pro Tyr Phe Ile Lys Trp Ala Arg Tyr Asn Phe Phe
 155 160 165
 atc atc tta tat cct gtt gga gtt gct ggt gaa ctt ctt aca ata tac 701
 Ile Ile Leu Tyr Pro Val Gly Val Ala Gly Glu Leu Leu Thr Ile Tyr
 15 170 175 180
 gct gcc ttg ccg cat gtg aag aaa aca gga atg ttt tca ata aga ctt 749
 Ala Ala Leu Pro His Val Lys Lys Thr Gly Met Phe Ser Ile Arg Leu
 185 190 195
 cct aac aaa tac aat gtc tct ttt gac tac tat tat ttt ctt ctt ata 797
 20 Pro Asn Lys Tyr Asn Val Ser Phe Asp Tyr Tyr Tyr Phe Leu Leu Ile
 200 205 210 215
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 Thr Met Ala Ser Tyr Ile Pro Leu Phe Pro Gln Leu Tyr Phe His Met
 220 225 230
 25 tta cgt caa aga aga aag gtg ctt cat gga gag gtg att gta gaa aag 893
 Leu Arg Gln Arg Arg Lys Val Leu His Gly Glu Val Ile Val Glu Lys
 235 240 245
 gat gat taaatgatct ctgcaaacaa ggtgcttttt ccagaataac caagattacc t 950
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44/45

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 25 30 35
 Tyr Asp Ile Ala Met Thr Ala Gly Trp Leu Val Leu Ala Ile Ala Met
 40 45 50 55
 15 Val Arg Phe Tyr Met Glu Lys Gly Thr His Arg Gly Leu Tyr Lys Ser
 60 65 70
 Ile Gln Lys Thr Leu Lys Phe Phe Gln Thr Phe Ala Leu Leu Glu Ile
 75 80 85
 Val His Cys Leu Ile Gly Ile Val Pro Thr Ser Val Ile Val Thr Gly
 20 90 95 100
 Val Gln Val Ser Ser Arg Ile Phe Met Val Trp Leu Ile Thr His Ser
 105 110 115
 Ile Lys Pro Ile Gln Asn Glu Glu Ser Val Val Leu Phe Leu Val Ala
 120 125 130 135
 25 Trp Thr Val Thr Glu Ile Thr Arg Tyr Ser Phe Tyr Thr Phe Ser Leu
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 Leu Asp His Leu Pro Tyr Phe Ile Lys Trp Ala Arg Tyr Asn Phe Phe
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 Ile Ile Leu Tyr Pro Val Gly Val Ala Gly Glu Leu Leu Thr Ile Tyr
 30 170 175 180
 Ala Ala Leu Pro His Val Lys Lys Thr Gly Met Phe Ser Ile Arg Leu
 185 190 195

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45/45

Pro Asn Lys Tyr Asn Val Ser Phe Asp Tyr Tyr Tyr Phe Leu Leu Ile
200 205 210 215
Thr Met Ala Ser Tyr Ile Pro Leu Phe Pro Gln Leu Tyr Phe His Met
220 225 230
5 Leu Arg Gln Arg Arg Lys Val Leu His Gly Glu Val Ile Val Glu Lys
235 240 245
Asp Asp

TUESDAY 11:50:24